ATGCCCAAGCGCGCGCACTGGGGGGCCCTCTCCGTGGTGCTGATCCTGCTTTGGGGCCATCCGCGAGTGGCGCTGGCCTGCCCGCATCCTTGTGCCT
GCTACGTCCCCAGCGAGGTCCACTGCACGTTCCGATCCCTGGCTTCCGTGCCCGCTGGCATTGCTAGACACGTGGAAAGAATCAATTTGGGGTTTAA
TAGCATACAGGCCCTGTCAGAAACCTCATTTGCAGGACTGACCAAGTTGGAGCTACTTATGATTCACGGCAATGAGATCCCAAGCATCCCCGATGGA
GCTTTAAGAGACCTCAGCTCTCTTCAGGTTTTCAAGTTCAGCTACAACAAGCTGAGAGTGATCACAGGACAGACCCTCCAGGGTCTCTCTAACTTAA
TGAGGCTGCACATTGACCACAACAAGATCGAGTTTATCCACCCTCAAGCTTTCAACGGCTTAACGTCTCTGAGGCTACTCCATTTGGAAGGAAATCT
CCTCCACCAGCTGCACCCCAGCACCTTCTCCACGTTCACATTTTTGGATTATTTCAGACTCTCCACCATAAGGCACCTCTACTTAGCAGAGAACATG
GTTAGAACTCTTCCTGCCAGCATGCTTCGGAACATGCCGCTTCTGGAGAATCTTTACTTGCAGGGAAATCCGTGGACCTGCGATTGTGAGATGAGAT
GGTTTTTGGAATGGGATGCAAAATCCAGAGGAATTCTGAAGTGTAAAAAGGACAAAGCTTATGAAGGCGGTCAGTTGTGTGCAATGTGCTTCAGTCC
AAAGAAGTTGTACAAACATGAGATACACAAGCTGAAGGACATGACTTGTCTGAAGCCTTCAATAGAGTCCCCTCTGAGACAGAACAGGAGCAGGAGT
ATTGAGGAGGAGCAAGAACAGGAAGAGGATGGTGGCAGCCAGCTCATCCTGGAGAAATTCCAACTGCCCCAGTGGAGCATCTCTTTGAATATGACCG
ACGAGCACGGGAACATGGTGAACTTGGTCTGTGACATCAAGAAACCAATGGATGTGTACAAGATTCACTTGAACCAAACGGATCCTCCAGATATTGA
CATAAATGCAACAGTTGCCTTGGACTTTGAGTGTCCAATGACCCGAGAAAACTATGAAAAGCTATGGAAATTGATAGCATACTACAGTGAAGTTCCC
GTGAAGCTACACAGAGAGCTCATGCTCAGCAAAGACCCCAGAGTCAGCTACCAGTACAGGCAGGATGCTGATGAGGAAGCTCTTTACTACACAGGTG
TGAGAGCCCAGATTCTTGCAGAACCAGAATGGGTCATGCAGCCATCCATAGATATCCAGCTGAACCGACGTCAGAGTACGGCCAAGAAGGTGCTACT
TTCCTACTACACCCAGTATTCTCAAACAATATCCACCAAAGATACAAGGCAGGCTCGGGGCAGAAGCTGGGTAATGATTGAGCCTAGTGGAGCTGTG
CAAAGAGATCAGACTGTCCTGGAAGGGGGTCCATGCCAGTTGAGCTGCAACGTGAAAGCTTCTGAGAGTCCATCTATCTTCTGGGTGCTTCCAGATG
GCTCCATCCTGAAAGCGCCCATGGATGACCCAGACAGCAAGTTCTCCATTCTCAGCAGTGGCTGGCTGAGGATCAAGTCCATGGAGCCATCTGACTC
AGGCTTGTACCAGTGCATTGCTCAAGTGAGGGATGAAATGGACCGCATGGTATATAGGGTACTTGTGCAGTCTCCCTCCACTCAGCCAGCCGAGAAA
GACACAGTGACAATTGGCAAGAACCCAGGGGAGTCGGTGACATTGCCTTGCAATGCTTTAGCAATACCCGAAGCCCACCTTAGCTGGATTCTTCCAA
ACAGAAGGATAATTAATGATTTGGCTAACACATCACATGTATACATGTTGCCAAATGGAACTCTTTCCATCCCAAAGGTCCAAGTCAGTGATAGTGG
TTACTACAGATGTGTGGCTGTCAACCAGCAAGGGGCAGACCATTTTACGGTGGGAATCACAGTGACCAAGAAAGGGTCTGGCTTGCCATCCAAAAGA
GGCAGACGCCCAGGTGCAAAGGCTCTTTCCAGAGTCAGAGAAGACATCGTGGAGGATGAAGGGGGCTCGGGCATGGGAGATGAAGAGAACACTTCAA
GGAGACTTCTGCATCCAAAGGACCAAGAGGTGTTCCTCAAAACAAAGGATGATGCCATCAATGGAGACAAGAAAGCCAAGAAAGGGAGAAGAAAGCT
GAAACTCTGGAAGCATTCGGAAAAAGAACCAGAGACCAATGTTGCAGAAGGTCGCAGAGTGTTTGAATCTAGACGAAGGATAAACATGGCAAACAAA
CAGATTAATCCGGAGCGCTGGGCTGATATTTTAGCCAAAGTCCGTGGGAAAAATCTCCCTAAGGGCACAGAAGTACCCCCGTTGATTAAAACCACAA
GTCCTCCATCCTTGAGCCTAGAAGTCACACCACCTTTTCCTGCTGTTTCTCCCCCCTCAGCATCTCCTGTGCAGACAGTAACCAGTGCTGAAGAATC
CTCAGCAGATGTACCTCTACTTGGTGAAGAAGAGCACGTTTTGGGTACCATTTCCTCAGCCAGCATGGGGCTAGAACACAACCACAATGGAGTTATT
CTTGTTGAACCTGAAGTAACAAGCACACCTCTGGAGGAAGTTGTTGATGACCTTTCTGAGAAGACTGAGGAGATAACTTCCACTGAAGGAGACCTGA
AGGGGACAGCAGCCCCTACACTTATATCTGAGCCTTATGAACCATCTCCTACTCTGCACACATTAGACACAGTCTATGAAAAGCCCACCCATGAAGA
GACGGCAACAGAGGGTTGGTCTGCAGCAGATGTTGGATCGTCACCAGAGCCCACATCCAGTGAGTATGAGCCTCCATTGGATGCTGTCTCCTTGGCT
GAGTCTGAGCCCATGCAATACTTTGACCCAGATTTGGAGACTAAGTCACAACCAGATGAGGATAAGATGAAAGAAGACACCTTTGCACACCTTACTC
CAACCCCCACCATCTGGGTTAATGACTCCAGTACATCACAGTTATTTGAGGATTCTACTATAGGGGAACCAGGTGTCCCAGGCCAATCACATCTACA
AGGACTGACAGACAACATCCACCTTGTGAAAAGTAGTCTAAGCACTCAAGACACCTTACTGATTAAAAAGGGTATGAAAGAGATGTCTCAGACACTA
CAGGGAGGAAATATGCTAGAGGGAGACCCCACACACTCCAGAAGTTCTGAGAGTGAGGGCCAAGAGAGCAAATCCATCACTTTGCCTGACTCCACAC
TGGGTATAATGAGCAGTATGTCTCCAGTTAAGAAGCCTGCGGAAACCACAGTTGGTACCCTCCTAGACAAAGACACCACAACAGTAACAACAACACC
AAGGCAAAAAGTTGCTCCGTCATCCACCATGAGCACTCACCCTTCTCGAAGGAGACCCAACGGGAGAAGGAGATTACGCCCCAACAAATTCCGCCAC
CGGCACAAGCAAACCCCACCCACAACTTTTGCCCCATCAGAGACTTTTTCTACTCAACCAACTCAAGCACCTGACATTAAGATTTCAAGTCAAGTGG
AGAGTTCTCTGGTTCCTACAGCTTGGGTGGATAACACAGTTAATACCCCCAAACAGTTGGAAATGGAGAAGAATGCAGAACCCACATCCAAGGGAAC
ACCACGGAGAAAACACGGGAAGAGGCCAAACAAACATCGATATACCCCTTCTACAGTGAGCTCAAGAGCGTCCGGATCCAAGCCCAGCCCTTCTCCA
GAAAATAAACATAGAAACATTGTTACTCCCAGTTCAGAAACTATACTTTTGCCTAGAACTGTTTCTCTGAAAACTGAGGGCCCTTATGATTCCTTAG
ATTACATGACAACCACCAGAAAAATATTCATCTTACCCTAAAGTCCAAGAGACACTTCCAGTCACATATAAACCCACATCAGATGGAAAAGAAAT
TAAGGATGATGTTGCCACAAATGTTGACAAACATAAAAGTGACATTTTAGTCACTGGTGAATCAATTACTAATGCCATACCAACTTCTCGCTCCTTG
GTCTCCACTATGGGAGAATTTAAGGAAGAATCCTCTCCTGTAGGCTTTCCAGGAACTCCAACCTGGAATCCCTCAAGGACGGCCCAGCCTGGGAGGC
TACAGACAGACATACCTGTTACCACTTCTGGGGAAAATCTTACAGACCCTCCCCTTCTTAAAGAGCTTGAGGATGTGGATTTCACTTCCGAGTTTTT
GTCCTCTTTGACAGTCTCCACACCATTTCACCAGGAAGAAGCTGGTTCTTCCACAACTCTCTCAAGCATAAAAGTGGAGGTGGCTTCAAGTCAGGCA
GAAACCACCACCCTTGATCAAGATCATCTTGAAACCACTGTGGCTATTCTCCTTTCTGAAACTAGACCACAGAATCACACCCCTACTGCTGCCCGGA
TGAAGGAGCCAGCATCCTCGTCCCCATCCACAATTCTCATGTCTTTGGGACAAACCACCACCACTAAGCCAGCACTTCCCAGTCCAAGAATATCTCA
AGCATCTAGAGATTCCAAGGAAAATGTTTTCTTGAATTATGTGGGGAATCCAGAAACAGAAGCAACCCCAGTCAACAATGAAGGAACACAGCATATG
TCAGGGCCAAATGAATTATCAACACCCTCTTCCGACCGGGATGCATTTAACTTGTCTACAAAGCTGGAATTGGAAAAGCAAGTATTTGGTAGTAGGA
GTCTACCACGTGGCCCAGATAGCCAACGCCAGGATGGAAGAGTTCATGCTTCTCATCAACTAACCAGAGTCCCTGCCAAACCCATCCTACCAACAGC
AACAGTGAGGCTACCTGAAATGTCCACACAAAGCGCTTCCAGATACTTTGTAACTTCCCAGTCACCTCGTCACTGGACCAACAAACCGGAAATAACT
ACATATCCTTCTGGGGCTTTGCCAGAGAACAAACAGTTTACAACTCCAAGATTATCAAGTACAACAATTCCTCTCCCATTGCACATGTCCAAACCCA
GCATTCCTAGTAAGTTTACTGACCGAAGAACTGACCAATTCAATGGTTACTCCAAAGTGTTTGGAAATAACAACATCCCTGAGGCAAGAAACCCAGT
TGGAAAGCCTCCCAGTCCAAGAATTCCTCATTATTCCAATGGAAGACTCCCTTTCTTTACCAACAAGACTCTTTCTTTTCCACAGTTGGGAGTCACC
CGGAGACCCCAGATACCCACTTCTCCTGCCCCAGTAATGAGAGAGAGAAAAGTTATTCCAGGTTCCTACAACAGGATACATTCCCATAGCACCTTCC
ATCTGGACTTTGGCCCTCCGGCACCTCCGTTGTTGCACACTCCGCAGACCACGGGATCACCCTCAACTAACTTACAGAATATCCCTATGGTCTCTTC
CACCCAGAGTTCTATCTCCTTTATAACATCTTCTGTCCAGTCCTCAGGAAGCTTCCACCAGAGCAGCTCAAAGTTCTTTGCAGGAGGACCTCCTGCA
TCCAAATTCTGGTCTCTTGGGGAAAAGCCCCAAATCCTCACCAAGTCCCCACAGACTGTGTCCGTCACCGCTGAGACAGACACTGTGTTCCCCTGTG
AGGCAACAGGAAAACCAAAGCCTTTCGTTACTTGGACAAAGGTTTCCACAGGAGCTCTTATGACTCCGAATACCAGGATACAACGGTTTGAGGTTCT
CAAGAACGGTACCTTAGTGATACGGAAGGTTCAAGTACAAGATCGAGGCCAGTATATGTGCACCGCCAGCAACCTGCACGGCCTGGACAGGATGGTG
GTCTTGCTTTCGGTCACCGTGCAGCAACCTCAAATCCTAGCCTCCCACTACCAGGACGTCACTGTCTACCTGGGAGACACCATTGCAATGGAGTGTC
TGGCCAAAGGGACCCCAGCCCCCCAAATTTCCTGGATCTTCCCTGACAGGAGGGTGTGGCAAACTGTGTCCCCCGTGGAGAGCCGCATCACCCTGCA
CGAAAACCGGACCCTTTCCATCAAGGAGGCGTCCTTCTCAGACAGAGGCGTCTATAAGTGCGTGGCCAGCAATGCAGCCGGGGCGGACAGCCTGGCC
ATCCGCCTGCACGTGGCGGCACTGCCCCCCGTTATCCACCAGGAGAAGCTGGAGAACATCTCGCTGCCCCCGGGGCTCAGCATTCACATTCACTGCA
CTGCCAAGGCTGCGCCCCTGCCCAGCGTGCGCTGGGTGCTCGGGGACGGTACCCAGATCCGCCCCTCGCAGTTCCTCCACGGGAACTTGTTTGTTTT
CCCCAACGGGACGCTCTACATCCGCAACCTCGCGCCCAAGGACAGCGGGCGCTATGAGTGCGTGGCCGCCAACCTGGTAGGCTCCGCGCGCAGGACG
GTGCAGCTGAACGTGCAGCGTGCAGCAGCCAACGCGCGCATCACGGGCACCTCCCCGCGGAGGACGGACGTCAGGTACGGAGGAACCCTCAAGCTGG

FIG. 1

ACTGCAGCGCCTCGGGGGACCCCTGGCCGCGCATCCTCTGGAGGCTGCCGTCCAAGAGGATGATCGACGCGCTCTTCAGTTTTGATAGCAGAATCAA
GGTGTTTGCCAATGGGACCCTGGTGGTGAAATCAGTGACGGACAAAGATGCCGGAGATTACCTGTGCGTAGCTCGAAATAAGGTTGGTGATGACTAC
GTGGTGCTCAAAGTGGATGTGGTGATGAAACCGGCCAAGATTGAACACAAGGAGGAGAACGACCACAAAGTCTTCTACGGGGGTGACCTGAAAGTGG
ACTGTGTGGCCACCGGGCTTCCCAATCCCGAGATCTCCTGGAGCCTCCCAGACGGGAGTCTGGTGAACTCCTTCATGCAGTCGGATGACAGCGGTGG
ACGCACCAAGCGCTATGTCGTCTTCAACAATGGGACACTCTACTTTAACGAAGTGGGGATGAGGGAGGAAGGAGACTACACCTGCTTTGCTGAAAAT
CAGGTCGGGAAGGACGAGATGAGAGTCAGAGTCAAGGTGGTGACAGCGCCCGCCACCATCCGGAACAAGACTTACTTGGCGGTTCAGGTGCCCTATG
GAGACGTGGTCACTGTAGCCTGTGAGGCCAAAGGAGAACCCATGCCCAAGGTGACTTGGTTGTCCCCAACCAACAAGGTGATCCCCACCTCCTCTGA
GAAGTATCAGATATACCAAGATGGCACTCTCCTTATTCAGAAAGCCCAGCGTTCTGACAGCGGCAACTACACCTGCCTGGTCAGGAACAGCGCGGGA
GAGGATAGGAAGACGGTGTGGATTCACGTCAACGTCCAGCCACCCAAGATCAACGGTAACCCCAACCCCATCACCACCGTGCGGGAGATAGCAGCCG
GGGGCAGTCGGAAACTGATTGACTGCAAAGCTGAAGGCATCCCCACCCCGAGGGTGTTATGGGCTTTTCCCGAGGGTGTGGTTCTGCCAGCTCCATA
CTATGGAAACCGGATCACTGTCCATGGCAACGGTTCCCTGGACATCAGGAGTTTGAGGAAGAGCGACTCCGTCCAGCTGGTATGCATGGCACGCAAC
GAGGGAGGGGAGGCGAGGTTGATCGTGCAGCTCACTGTCCTGGAGCCCATGGAGAAACCCATCTTCCACGACCCGATCAGCGAGAAGATCACGGCCA
TGGCGGGCCACACCATCAGCCTCAACTGCTCTGCCGCGGGGACCCCGACACCCAGCCTGGTGTGGGTCCTTCCCAATGGCACCGATCTGCAGAGTGG
ACAGCAGCTGCAGCGCTTCTACCACAAGGCTGACGGCATGCTACACATTAGCGGTCTCTCCTCGGTGGACGCTGGGGCCTACCGCTGCGTGGCCCGC
AATGCCGCTGGCCACACGGAGAGGCTGGTCTCCCTGAAGGTGGGACTGAAGCCAGAAGCAAACAAGCAGTATCATAACCTGGTCAGCATCATCAATG
GTGAGACCCTGAAGCTCCCCTGCACCCCTCCCGGGGCTGGGCAGGGACGTTTCTCCTGGACGCTCCCCAATGGCATGCATCTGGAGGGCCCCCAAAC
CCTGGGACGCGTTTCTCTTCTGGACAATGGCACCCTCACGGTTCGTGAGGCCTCGGTGTTTGACAGGGGTACCTATGTATGCAGGATGGAGACGGAG
TACGGCCCTTCGGTCACCAGCATCCCCGTGATTGTGATCGCCTATCCTCCCCGGATCACCAGCGAGCCCACCCCGGTCATCTACACCCGGCCCGGGA
ACACCGTGAAACTGAACTGCATGGCTATGGGGATTCCCAAAGCTGACATCACGTGGGAGTTACCGGATAAGTCGCATCTGAAGGCAGGGGTTCAGGC
TCGTCTGTATGGAAACAGATTTCTTCACCCCCAGGGATCACTGACCATCCAGCATGCCACACAGAGAGATGCCGGCTTCTACAAGTGCATGGCAAAA
AACATTCTCGGCAGTGACTCCAAAACAACTTACATCCACGTCTTCTGAAATGTGGATTCCAGAATGATTGCTTAGGAACTGACAACAAAGCGGGGTT
TGTAAGGGAAGCCAGGTTGGGGAATAGGAGCTCTTAAATAATGTGTCACAGTGCATGGTGGCCTCTGGTGGGTTTCAAGTTGAGGTTGATCTTGATC
TACAATTGTTGGGAAAAGGAAGCAATGCAGACACGAGAAGGAGGGCTCAGCCTTGCTGAGACACTTTCTTTTGTGTTTACATCATGCCAGGGGCTTC
ATTCAGGGTGTCTGTGCTCTGACTGCAATTTTTCTTCTTTTGCAAATGCCACTCGACTGCCTTCATAAGCGTCCATAGGATATCTGAGGAACATTCA
TCAAAAATAAGCCATAGACATGAACAACACCTCACTACCCCATTGAAGACGCATCACCTAGTTAACCTGCTGCAGTTTTTACATGATAGACTTTGTT
CCAGATTGACAAGTCATCTTTCAGTTATTTCCTCTGTCACTTCAAAACTCCAGCTTGCCCAATAAGGATTTAGAACCAGAGTGACTGATATATATAT
ATATATTTTAATTCAGAGTTACATACATACAGCTACCATTTTATATGAAAAAAGAAAAACATTTCTTCCTGGAACTCACTTTTTATATAATGTTTTA
TATATATATTTTTTCCTTTCAAATCAGACGATGAGACTAGAAGGAGAAATACTTTCTGTCTTATTAAAATTAATAAATTATTGGTCTTTACAAGACT
TGGATACATTACAGCAGACATGGAAATATAATTTTAAAAAATTTCTCTCCAACCTCCTTCAAATTCAGTCACCACTGTTATATTACCTTCTCCAGGA
ACCCTCCAGTGGGGAAGGCTGCGATATTAGATTTCCTTGTATGCAAAGTTTTTGTTGAAAGCTGTGCTCAGAGGAGGTGAGAGGAGAGGAAGGAGAA
AACTGCATCATAACTTTACAGAATTGAATCTAGAGTCTTCCCCGAAAAGCCCAGAAACTTCTCTGCAGTATCTGGCTTGTCCATCTGGTCTAAGGTG
GCTGCTTCTTCCCCAGCCATGAGTCAGTTTGTGCCCATGAATAATACACGACCTGTTATTTCCATGACTGCTTTACTGTATTTTTAAGGTCAATATA
CTGTACATTTGATAATAAAATAATATTCTCCCAAAAAAAAAA

FIG. 1 - CONTINUED

MPKRAHWGALSVVLILLWGHPRVALACPHPCACYVPSEVHCTFRSLASVPAGIARHVERINLGFNSIQALSETSFAGLTKLELLMIHGNEIPSIPDG
ALRDLSSLQVFKFSYNKLRVITGQTLQGLSNLMRLHIDHNKIEFIHPQAFNGLTSLRLLHLEGNLLHQLHPSTFSTFTFLDYFRLSTIRHLYLAENM
VRTLPASMLRNMPLLENLYLQGNPWTCDCEMRWFLEWDAKSRGILKCKKDKAYEGGQLCAMCFSPKKLYKHEIHKLKDMTCLKPSIESPLRQNRSRS
IEEEQEQEEDGGSQLILEKFQLPQWSISLNMTDEHGNMVNLVCDIKKPMDVYKIHLNQTDPPDIDINATVALDFECPMTRENYEKLWKLIAYYSEVP
VKLHRELMLSKDPRVSYQYRQDADEEALYYTGVRAQILAEPEWVMQPSIDIQLNRRQSTAKKVLLSYYTQYSQTISTKDTRQARGRSWVMIEPSGAV
QRDQTVLEGGPCQLSCNVKASESPSIFWVLPDGSILKAPMDDPDSKFSILSSGWLRIKSMEPSDSGLYQCIAQVRDEMDRMVYRVLVQSPSTQPAEK
DTVTIGKNPGESVTLPCNALAIPEAHLSWILPNRRIINDLANTSHVYMLPNGTLSIPKVQVSDSGYYRCVAVNQQGADHFTVGITVTKKGSGLPSKR
GRRPGAKALSRVREDIVEDEGGSGMGDEENTSRRLLHPKDQEVFLKTKDDAINGDKKAKKGRRKLKLWKHSEKEPETNVAEGRRVFESRRRINMANK
QINPERWADILAKVRGKNLPKGTEVPPLIKTTSPPSLSLEVTPPFPAVSPPSASPVQTVTSAEESSADVPLLGEEEHVLGTISSASMGLEHNHNGVI
LVEPEVTSTPLEEVVDDLSEKTEEITSTEGDLKGTAAPTLISEPYEPSPTLHTLDTVYEKPTHEETATEGWSAADVGSSPEPTSSEYEPPLDAVSLA
ESEPMQYFDPDLETKSQPDEDKMKEDTFAHLTPTPTIWVNDSSTSQLFEDSTIGEPGVPGQSHLQGLTDNIHLVKSSLSTQDTLLIKKGMKEMSQTL
QGGNMLEGDPTHSRSSESEGQESKSITLPDSTLGIMSSMSPVKKPAETTVGTLLDKDTTTVTTTPRQKVAPSSTMSTHPSRRRPNGRRRLRPNKFRH
RHKQTPPTTFAPSETFSTQPTQAPDIKISSQVESSLVPTAWVDNTVNTPKQLEMEKNAEPTSKGTPRRKHGKRPNKHRYTPSTVSSRASGSKPSPSP
ENKHRNIVTPSSETILLPRTVSLKTEGPYDSLDYMTTTRKIYSSYPKVQETLPVTYKPTSDGKEIKDDVATNVDKHKSDILVTGESITNAIPTSRSL
VSTMGEFKEESSPVGFPGTPTWNPSRTAQPGRLQTDIPVTTSGENLTDPPLLKELEDVDFTSEFLSSLTVSTPFHQEEAGSSTTLSSIKVEVASSQA
ETTTLDQDHLETTVAILLSETRPQNHTPTAARMKEPASSSPSTILMSLGQTTTTKPALPSPRISQASRDSKENVFLNYVGNPETEATPVNNEGTQHM
SGPNELSTPSSDRDAFNLSTKLELEKQVFGSRSLPRGPDSQRQDGRVHASHQLTRVPAKPILPTATVRLPEMSTQSASRYFVTSQSPRHWTNKPEIT
TYPSGALPENKQFTTPRLSSTTIPLPLHMSKPSIPSKFTDRRTDQFNGYSKVFGNNNIPEARNPVGKPPSPRIPHYSNGRLPFFTNKTLSFPQLGVT
RRPQIPTSPAPVMRERKVIPGSYNRIHSHSTFHLDFGPPAPPLLHTPQTTGSPSTNLQNIPMVSSTQSSISFITSSVQSSGSFHQSSSKFFAGGPPA
SKFWSLGEKPQILTKSPQTVSVTAETDTVFPCEATGKPKPFVTWTKVSTGALMTPNTRIQRFEVLKNGTLVIRKVQVQDRGQYMCTASNLHGLDRMV
VLLSVTVQQPQILASHYQDVTVYLGDTIAMECLAKGTPAPQISWIFPDRRVWQTVSPVESRITLHENRTLSIKEASFSDRGVYKCVASNAAGADSLA
IRLHVAALPPVIHQEKLENISLPPGLSIHIHCTAKAAPLPSVRWVLGDGTQIRPSQFLHGNLFVFPNGTLYIRNLAPKDSGRYECVAANLVGSARRT
VQLNVQRAAANARITGTSPRRTDVRYGGTLKLDCSASGDPWPRILWRLPSKRMIDALFSFDSRIKVFANGTLVVKSVTDKDAGDYLCVARNKVGDDY
VVLKVDVVMKPAKIEHKEENDHKVFYGGDLKVDCVATGLPNPEISWSLPDGSLVNSFMQSDDSGGRTKRYVVFNNGTLYFNEVGMREEGDYTCFAEN
QVGKDEMRVRVKVVTAPATIRNKTYLAVQVPYGDVVTVACEAKGEPMPKVTWLSPTNKVIPTSSEKYQIYQDGTLLIQKAQRSDSGNYTCLVRNSAG
EDRKTVWIHVNVQPPKINGNPNPITTVREIAAGGSRKLIDCKAEGIPTPRVLWAFPEGVVLPAPYYGNRITVHGNGSLDIRSLRKSDSVQLVCMARN
EGGEARLIVQLTVLEPMEKPIFHDPISEKITAMAGHTISLNCSAAGTPTPSLVWVLPNGTDLQSGQQLQRFYHKADGMLHISGLSSVDAGAYRCVAR
NAAGHTERLVSLKVGLKPEANKQYHNLVSIINGETLKLPCTPPGAGQGRFSWTLPNGMHLEGPQTLGRVSLLDNGTLTVREASVFDRGTYVCRMETE
YGPSVTSIPVIVIAYPPRITSEPTPVIYTRPGNTVKLNCMAMGIPKADITWELPDKSHLKAGVQARLYGNRFLHPQGSLTIQHATQRDAGFYKCMAK
NILGSDSKTTYIHVF

FIG. 2

Levels of Adlican mRNA in human cartilage by RT-PCR

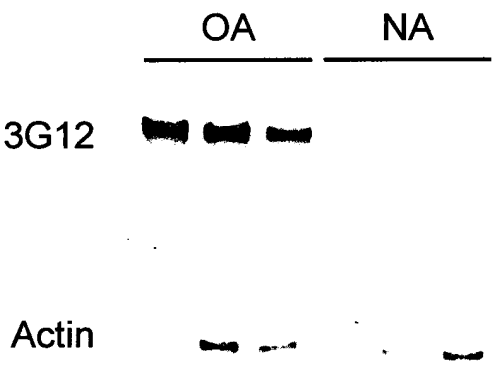


FIG.3

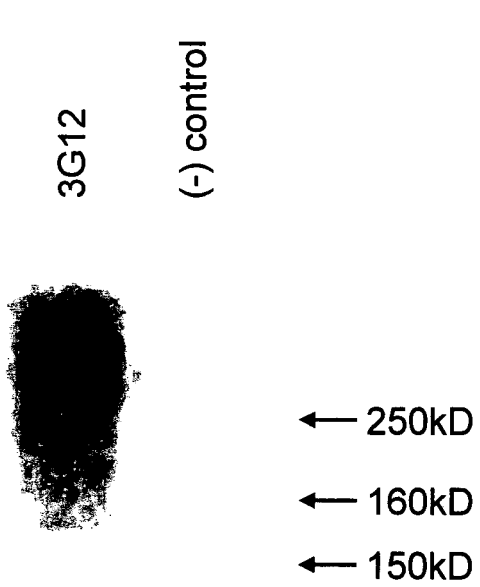


FIG.4

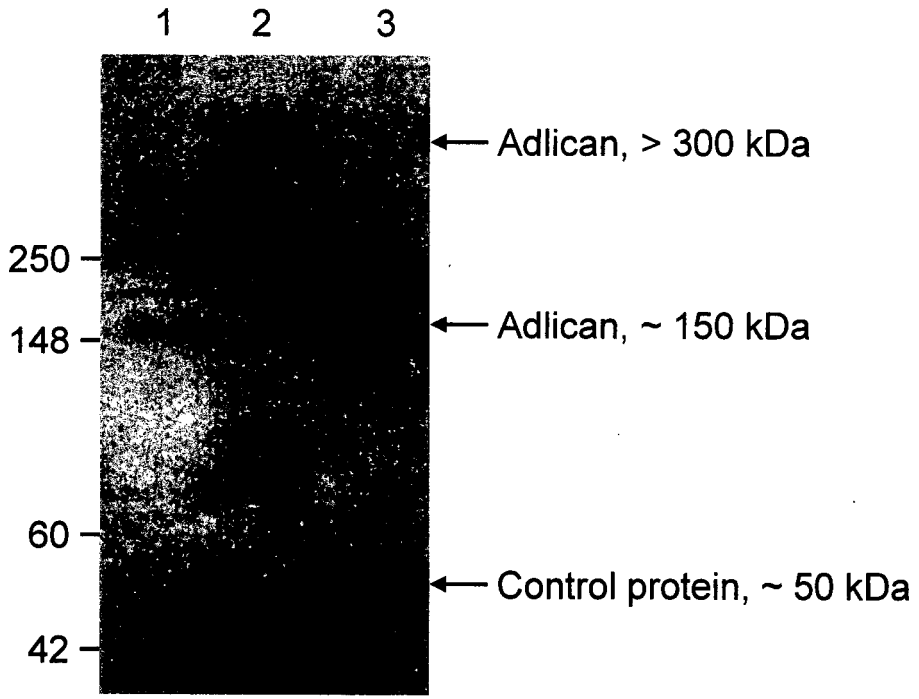
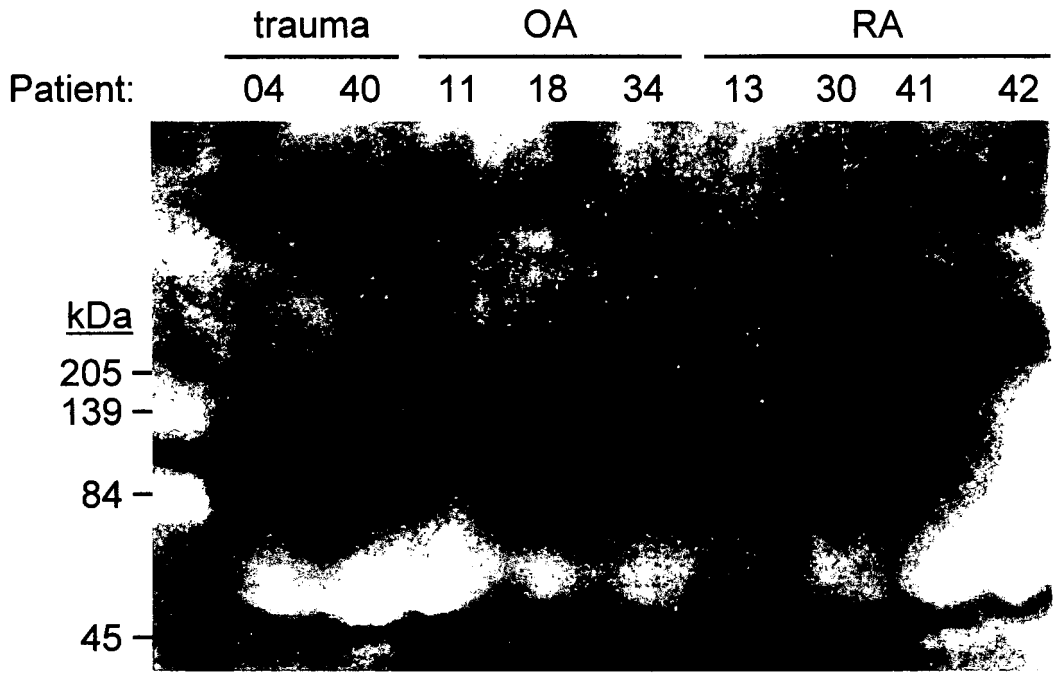


FIG.5



DIAGNOSIS	Western blot positive/total
trauma	1/2
gout	0/3
OA, mild/mod.	2/4
OA, severe	4/4 ←
RA, moderate	2/6
RA, severe	1/2

FIG.6